



Accelerated MCP Bootcamp MCP250

All encompassing MCP Bootcamp from deployment to operations in four days

The Accelerated MCP Bootcamp (MCP250) course is a 4 day instructor-led training for architects, cloud and system administrators, devops and software engineers, or other IT team members responsible for the deployment, configuration, and maintenance of production-ready OpenStack and Kubernetes. The course is broken up into two sections: **lectures** and **labs**.

The **lectures** provide an overview of Mirantis Cloud Platform (MCP), its high-level architecture and technology stack. The training will guide students through Mirantis Cloud Platform (MCP) concepts, its features and how MCP can be used to deploy, configure and manage cloud environments, software defined networks, software defined storage solutions.

The **labs** provide hands-on experience with deploying MCP using MaaS, SaltStack, and Jenkins. Once MCP is deployed, model driven principles are applied to deploy OpenStack and Kubernetes clusters. Students will also learn to install and configure additional components such as OpenContrail for OpenStack overlay networking, Ceph as object and block storage, and Stacklight for logging, monitoring, and alerting. MCP Operations labs will focus on utilizing the Reclass model and DriveTrain to apply configuration changes. There will be a comprehensive practice to allow students to freely apply their knowledge to tasks such as adding a new compute node to the OpenStack cluster.

Course Details

- Duration: 4 Days
- Hours: 9:00 a.m. - 5:00 p.m.

Prerequisites

- Strong experience using Linux command line
- Basic OpenStack experience (OpenStack Bootcamp I or equivalent)

Lab Requirements

- Laptop with WiFi Card
- Web browser supporting HTML5
- SSH Client

Target Audience

- Cloud Architects
- Cloud Administrators
- Deployment, DevOps, Software Engineers
- IT team members responsible for the deployment, configuration, and maintenance of Cloud Infrastructure

Objectives

- Familiarity with Mirantis Cloud Platform (MCP)
- Understanding of the most common OpenStack challenges in production and how MCP solves these challenges
- Understanding of MCP architecture and its technology stack
- Hands-on experience with MCP as a tool to deploy OpenStack and Kubernetes
- Understanding Infrastructure as Code & Code-review process
- Hands-on experience with configuring and updating services using DriveTrain
- Hands-on experience with common troubleshooting steps utilizing Stacklight

Outline

- Course Introduction
- Introduction to MCP
- SaltStack, Reclass, and Model Driven Architecture
- Bootstrapping MCP, OpenStack & Kubernetes Deployment
- DriveTrain deployment and operations using pipelines
- Stacklight Logging, Monitoring and Altering
- Comprehensive Practice

MODULE 1

Introduction to MCP

Theory

- What is Mirantis Cloud Platform
- MCP High level architecture

Workshops

- Explore the classroom environment

MODULE 2

MaaS overview

Theory

- MaaS overview, limitations, alternatives, use cases, basic flows
- MaaS architecture
- MaaS installation and configuration

Workshops

- Install and configure MaaS
- Bare metal provisioning with MaaS

MODULE 3

Configuration management with Salt

Theory

- Introduction to Salt
- Salt execution module
- Configuration management with state modules

Workshops

- Salt CLI, grains, files, pillars, states, formulas

MODULE 4

MCP deployment model

Theory

- Model driven architecture
- Re-class and Cookie-cutter
- MCP deployment process
- MCP reference architectures

Workshops

- Re-class model

MODULE 5

MCP DriveTrain

Theory

- Introduction to DriveTrain
- Git, Gerrit, Jenkins
- Operations workflow using DriveTrain
- Networking in MCP

Workshops

- MCP Bootstrapping
- Kubernetes Deployment with MCP
- OpenStack Deployment
- Ceph Deployment
- DriveTrain Operations

MODULE 6

Stacklight LMA

Theory

- MCP LMA

Workshops

- MCP logging, monitoring, alerting

MODULE 7

Trouble Shooting & Comprehensive Practice

Theory

- Common troubleshooting steps

Workshops

- Comprehensive Lab Practice